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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,860	04/18/2001	Michael Heckmeier	MERCK 2226	5889

23599 7590 09/05/2002

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ARLINGTON, VA 22201

EXAMINER

WU, SHEAN CHIU

ART UNIT	PAPER NUMBER
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1756

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DATE MAILED: 09/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/836,860

Examin r

Shean C Wu

Applicant(s)

HECKMEIER ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

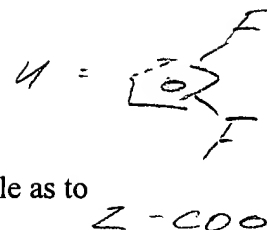
Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

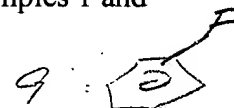
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DETAILED ACTION***Specification***

1. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood: the compound abbreviation for GZU-3-N and UZU-3-N in Examples 1 and



2.



Applicant is required to submit an amendment, which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Gray et al. (US 5,156,763 or 5,334,327).

The references disclose a laterally fluorinated 4-cyanophenyl benzoate, which is useful for electrooptical display device. See formulae I.2-I.7. The liquid crystal mixture contains a compound of laterally fluorinated 4-cyanophenyl benzoate with E7, which E7

is known having a positive dielectric anisotropy (see US 4,143,947, col. 6, lines 16-21).

Therefore, the references anticipate the claimed invention.

4. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 9-157,654.

The reference discloses a laterally fluorinated 4-cyanophenyl benzoate, which is useful for electrooptical display device (STN or TN). See formulae I-1 and I-2. See Examples 1-5, which comprise laterally fluorinated 4-cyanophenyl benzoate with other suitable liquid crystal compounds having positive dielectric anisotropy. Therefore, the references anticipate the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13 and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-157654 above.

The reference differs from the claims in that the claims have an IPS display device. The liquid crystal compounds shown in Examples 3-3 are corresponding to the compounds of the present formulae I, II, III and V. The compounds of Examples 3-5 are corresponding to the compounds of the present formulae I, II, III and IV. The

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concentration ranges are well within the present invention. The liquid crystal properties (such as birefringence, flow viscosity, resistivity and clearing point) for these two examples are similar to the present invention except the rotational viscosity, which the reference did not disclose. However, the reference mixtures read on the present mixture. One ordinary skilled in the art will predict the reference might well have similar rotation viscosity as the present invention. Also, the liquid crystal compositions depend on their properties can be used as components for IPS (in-plane switching), VA (vertical orientation) methods, ECB (birefringence control), GH (guest-host) modes, TN (twisted nematic), STN (super-twisted nematic) and AM (active nematic) methods (see US col. 63, lines 38046 on col. 636.348,244). Therefore, it would have been obvious to those skilled in the art to take advantage of the reference compositions having unique liquid crystal properties, which is useful for IPS display device.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C Wu whose telephone number is 703-308-3956. The examiner can normally be reached on Monday-Friday 9:30 -6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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Shean C Wu
Primary Examiner
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scw

September 2, 2002